

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,359,860 B1
APPLICATION NO. : 10/789397
DATED : April 15, 2008
INVENTOR(S) : Edward S. Miller

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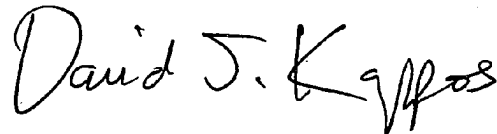
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

The title page showing the illustrative figure should be deleted to be replaced with the attached title page.

The drawing sheet, consisting of Figs. 3 and 7, should be deleted to be replaced with the drawing sheet, consisting of Figs. 3, 7A, 7B, 7C, as shown on the attached pages.

Signed and Sealed this

Seventeenth Day of November, 2009

A handwritten signature in black ink, reading "David J. Kappos". The signature is written in a cursive, flowing style with a large initial 'D' and 'K'.

David J. Kappos
Director of the United States Patent and Trademark Office

(12) **United States Patent**
Miller et al.

(10) **Patent No.: US 7,359,860 B1**
 (45) **Date of Patent: Apr. 15, 2008**

(54) **CALL FLOW OBJECT MODEL IN A SPEECH RECOGNITION SYSTEM**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 846 days.

5,615,296 A	3/1997	Stanford et al.
5,649,057 A	7/1997	Lee et al.
5,719,921 A	2/1998	Vysotsky et al.
5,774,628 A	6/1998	Hemphill
5,867,817 A	2/1999	Catallo et al.
6,006,185 A	12/1999	Immarco
6,173,266 B1 *	1/2001	Marx et al. 704/270
6,263,308 B1	7/2001	Heckerman et al.
6,298,324 B1	10/2001	Zuberec et al.
6,321,198 B1 *	11/2001	Hank et al. 704/270
6,377,921 B1	4/2002	Bahl et al.
6,975,985 B2	12/2005	Kriechbaum et al.
2002/0095295 A1	7/2002	Cohen et al.
2002/0136378 A1	9/2002	Strubbe et al.
2002/0193990 A1	12/2002	Komatsu
2005/0091057 A1 *	4/2005	Phillips et al. 704/270.1

* cited by examiner

(21) Appl. No.: 10/789,397

(22) Filed: Feb. 27, 2004

Related U.S. Application Data

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(51) Int. Cl. **G10L 15/00** (2006.01)

(52) U.S. Cl. 704/275; 704/270; 379/88.05

(58) Field of Classification Search 704/270, 704/275; 379/88.05, 88.1
 See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

5,384,892 A 1/1995 Strong
 5,390,278 A 2/1995 Gupta et al.

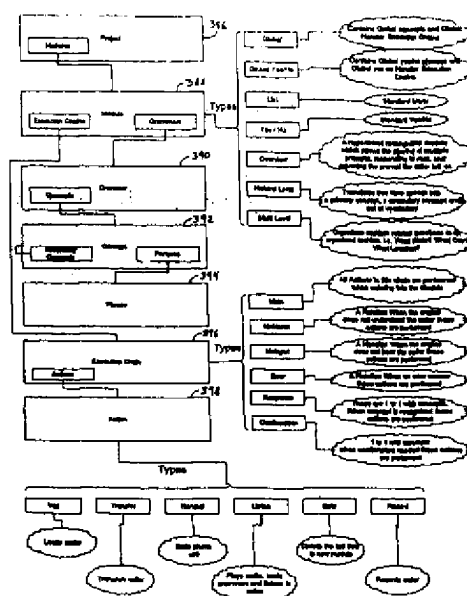
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(57) ABSTRACT

Systems and methods are provided for embodiments of a speech recognition system call flow object model. The systems and methods organize and execute, for example, multiple question directed dialogs, overview dialogs, or natural language directed dialogs. In certain embodiments, the organizing and executing of the natural language directed dialogs uses primary and secondary concepts without requiring a structured response. The systems and methods enable the call flow designers to define particular call flows without requiring the designers to perform any programming or coding.

9 Claims, 8 Drawing Sheets



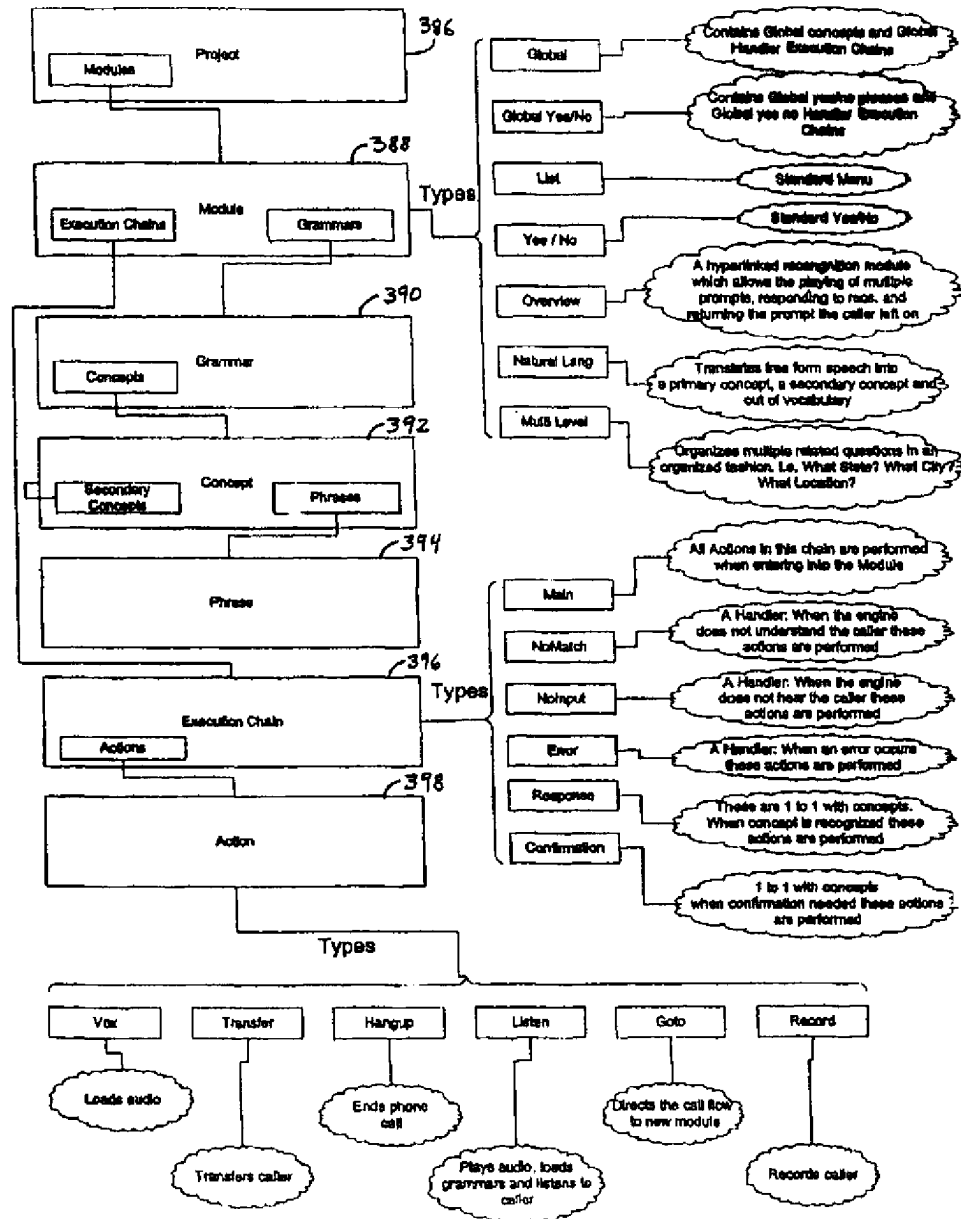


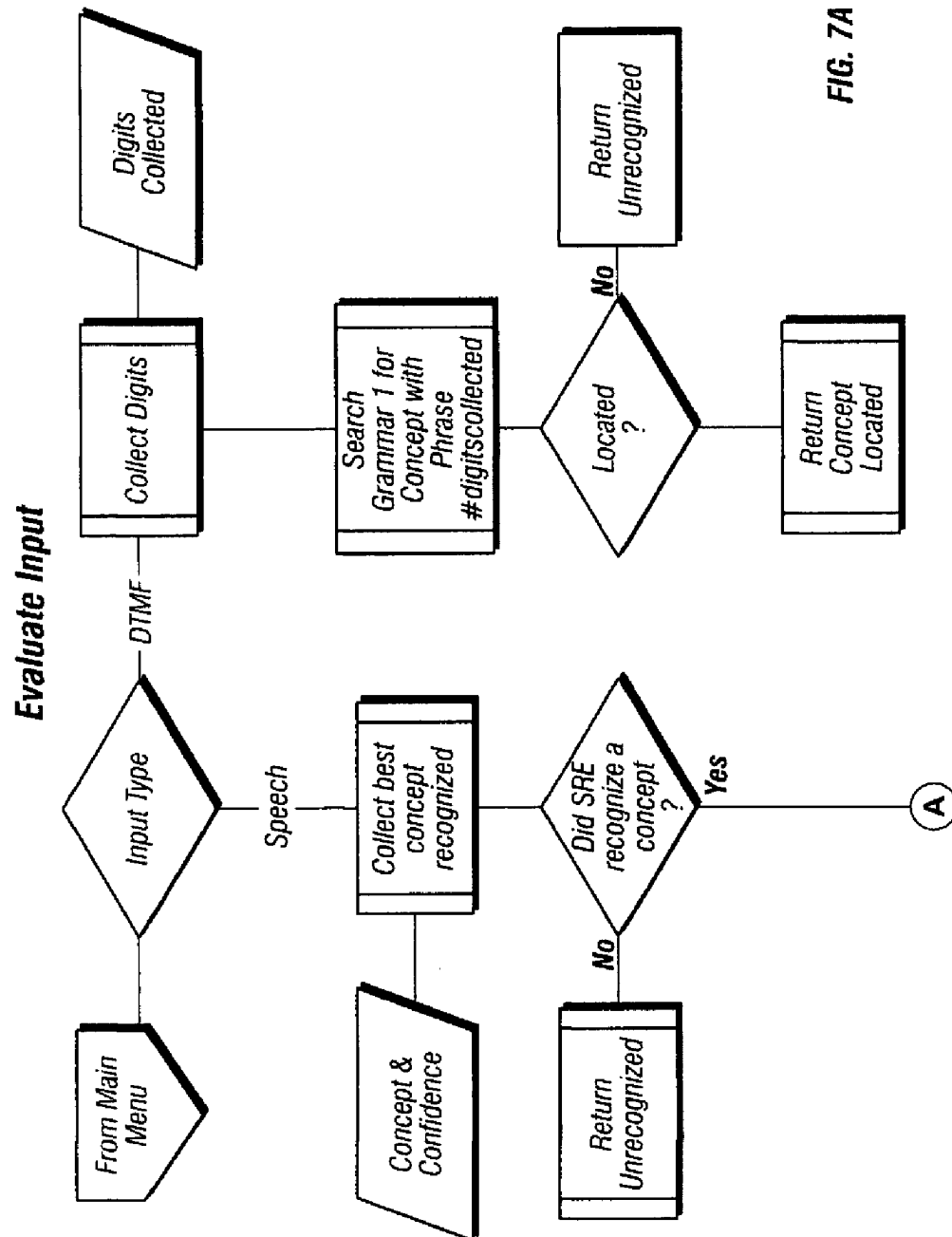
FIG. 3

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